REMARKS

This is in response to the Office Action of October 5, 2009, and follows up on the telephone interview between the examiner and the undersigned on December 11, 2009.

In the Office Action, all pending claims were rejected under 35 U.S.C. § 112 as being indefinite as to whether the claims affirmatively recited, and therefore included, the FCC unit itself, and all pending claims other than 10, 12, 13, 25, 32, 33, 35-40, 42-45, and 58 were also rejected as anticipated or obvious in view of the newly-asserted Freeman reference. In response here, applicant has amended all three pending independent claims (1, 18, and 32) in a manner that should obviate the rejections, as discussed more fully below. New claims 60-70 have been added, and claims 15, 27, and 43 have been cancelled.

At the outset, the undersigned thanks the examiner for the above-mentioned interview. In preparation for the interview, applicant had sent the examiner a set of informal, representative claims to use as the basis of the discussions. Those claims – amended independent claims 1 and 18, and new claims 60-63 – are now formally presented here. Other amendments and new claims consistent with the ones submitted as representative for the interview are also presented here. During the interview, the pending rejections were discussed in the context of the representative amended and new claims. The examiner indicated that the amendments to the independent claims should overcome the rejections under §112, by clarifying that the existing claims covered only the injection/loader unit and not a combination of that unit with the FCC unit. The examiner also indicated that she would review the other amendments to claims 1 and 18, which specify that the injector/loader also includes means for monitoring internal pressure, for patentability over the rejections based on Freeman. Finally, the examiner indicated that claims 60-63, which specifically include the FCC unit in combination with the loader/injector, were free of the issue under §112 and were patentable over the cited art, including Freeman.

With respect to the rejections under §112, independent claims 1, 18, and 32 have been amended in various ways to make clear that these claims and the associated dependent claims do not require that the injection/loading system actually be connected to the FCC unit or otherwise

include the presence of the FCC unit. For example, these claims have all been amended to recite that the system is "*adapted* to be" in fluid communication with the FCC unit, rather than "being" in fluid communication. Other amendments to these claims, and to certain of the dependent claims as appropriate, are directed to this same concept. See, for example, the amendment to dependent claim 12, specifying that the vacuum producer of the loading unit is "adapted to be" in fluid communication with a source of pressurized air (such as would be available at a refinery), rather than actually "being" in fluid communication.

With respect to the rejection of independent claims 1 and 18, and certain of the dependent claims, as anticipated or obvious from Freeman, amendments have been made to specify that the loading system includes "means for monitoring pressure" in the transfer pot (claim 1) or loading unit (claim 18). Support for this amendment is found at paragraphs [0080] and [0081] of the specification, which refer to a pressure transducer that performs this function.[1]

As discussed during the interview, the claimed loading system differs fundamentally from the system of Freeman, and this difference is highlighted by the recitation in these claims of the pressure monitoring element. In Freeman, the batching vessel 44 is slightly pressurized by flowing air into the vessel at two points, into the space above the contained particulates (col. 5, lines 23-28) and into the bottom of the bed of particulates, in order to partially fluidize the bed and entrain particles for discharge through an exit port, also at the bottom of the bed, to a remote location (col. 5, lines 28-42). The inlet and exit ports at the bottom of the bed in the batching vessel are diametrically opposite each other to facilitate entrainment from the vessel to a 'desired remote location." (col. 3, lines 18-23).

Freeman does not disclose any means for monitoring pressure in the batching vessel (or any means for monitoring pressure at the "remote location"). Freeman is unconcerned with the actually pressure in the batching vessel, because so long as there is *any* pressure in the vessel, the particles will be entrained by escaping air to the "remote location," which is presumably at

[1] In this regard, claim 18 here differs form the version earlier discussed with the examiner in that it recites that the "system" rather than the "loading unit" itself comprise the pressure monitoring means. Applicant does not believe this change affects the substance of the discussion about the claim.

atmospheric pressure, since Freeman discloses no particular "remote location" that would be pressurized, as would a fluid catalytic cracking unit.

In contrast, independent claims 1 and 18 are directed to a loading system that is specially adapted for use with "remote" structure that *is* pressurized, such as the regenerator of the FCC unit. See paragraph [0080] of the specification. Accordingly, means to monitor the pressure in the transfer vessel of the claimed loading system is recited so that the system is capable of transferring the particulate catalysts and/or additives to the FCC unit "in response to a pressure differential between them," as also recited in the claim. As those skilled in the art will realize, that magnitude of that differential, and therefore the required pressure in the vessel, will be dependent on such things as the distance between them, pipe configurations, flow meters, and other elements that affect and determine the pressure drop from the vessel to the FCC unit itself. But in any event, the pressure in the transfer vessel of the invention must be measureable so that the pressure is sufficiently above that in the FCC unit to deliver the catalyst/additive to that unit. Freeman is not concerned with delivery to a remote element that is itself pressurized, so the actual pressure in the batching vessel is not as great an issue. For this reason, Freeman does not suggest the use of a pressure monitor in the batching vessel, and it certainly does not anticipate the claims as amended.

New claims 60-63 were indicated by the examiner to be allowable during the interview on the basis of their inclusion of the FCC unit in combination with the loading system separately covered by the above-discussed claims. New independent claim 60 is a combination of an FCC unit with the loading system of claim 1, with the exception that the loading system within claim 60 does not recite the pressure monitoring means. In essence, the loading system within claim 60 has the same scope as did claim 1 prior to the present amendment to that claim. Likewise, new independent claim 65 is a combination of an FCC unit with the loading system of independent claim 18, with the exception that the loading system within claim 65 does not recite the pressure monitoring means in claim 18 as amended. The background of these two new claims is that the office action had suggested that claims 1 and 18 as then pending (even without

the newly recited pressure monitor) would have been patentable over Freeman if they had affirmatively recited the FCC unit. These new independent claims are presented as a result.

Claims 62 and 66, dependent on claim 60 and 65, respectively, incorporate the pressure monitor. Claims 63 and 67, which depend from claim 62 and 66, respectively, further incorporate means for monitoring the pressure in the FCC unit and means for determining the pressure differential between the loading unit and the FCC unit. Support for these further claim elements is found in paragraphs [0080] and [0081] of the specification.

New dependent claim 64, ultimately dependent from claim 60, incorporates the subject matter of claim 12 into the loading system of the combination. Finally, paragraph 9 of the office action indicated that then-pending claim 12 (dependent from claim 1) would have been allowable if rewritten to overcome the §112 rejection. Newly presented independent claim 69 represents such a re-written claim; it is directed to a combination of an FCC unit and the loading system of then-pending claim 12.

The above provides a complete response to the Office Action of October 5, 2009, and the claims are patentable and in condition to be allowed. The undersigned requests that the examiner call directly if there are any questions about the response or any matters that need to be addressed to further the issuance of patent from this application.

Respectfully submitted,

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